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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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08/939,050 09/26/97 GLITHERO

J A61-16737-US

EXAMINER

000128 LM02/0602
OFFICE OF GENERAL COUNSEL
HONEYWELL INC
HONEYWELL PLAZA
PO BOX 524
MINNEAPOLIS MN 55440-0524

DISORD.R

ART UNIT

PAPER NUMBER

2778

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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
08/939,050

Applicant(s)
Jason I. Glithero

Examiner
Ricardo Osorio

Group Art Unit
2778



☒ Responsive to communication(s) filed on Sep 27, 1997

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-7 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-7 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 2 and 5

☐ Interview Summary, PTO-413

☒ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's admitted prior art in view of Chang (5,298,919).

Under claims 1 and 5, applicant admits as prior art, in Fig. 1 and page 2, lines 1-19, an input device for an aircraft vehicle computer system comprising a cursor control housing including a wrist rest portion (figure 1; numeral 11A), a cursor control device mounted on said housing forward of said wrist rest portion and within finger reach of said wrist rest, said device generating cursor control signals representative of X-Y (see page 6, lines 29-33) actuations of said device by an operator.

However, applicant's admitted prior art fails to teach of a rotary knob mounted on said housing and within finger reach of said wrist rest, said knob generating rotary signals indicative of rotation of said knob.

Chang teaches, in Figs. 1 and 2, col. 4, lines 38-59 and col. 9, lines 8-28, a cursor control housing (Fig. 1, numeral 10) comprising a hand rest portion (see Figs. 1 and 2), a cursor control device

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(Fig. 1, numeral 32) forward of said hand rest portion and within finger reach, said device generating cursor control signals representative of operator activation of said device, and a rotary knob (Fig. 1, numeral 26) on said housing and within finger reach or said rest area, said knob generating rotary signals indicative of rotation of said knob.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the rotary knob, as taught by Chang, in the device admitted as prior art by the applicant because with the use of said knob, a third translation coordinate can be entered so that the cursor location can be entered more accurately (see col. 4, lines 41-44). Also, all the operations can be done without moving the hand from the hand rest so that the user does not need to move his eyes from the screen.

Under claims 2 and 6, applicant admits as prior art that said rotary knob can be a conventional coarse-fine knob (see page 6, lines 22-23).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the coarse knob to generate coarse rotary signals and the fine knob to generate fine rotary signals because these are well known in the art functions of said coarse-fine rotary knob (see specification, page 6, lines 22-23).

Under claim 3, applicant does not admit as prior art that the rotary knob extends axially from said housing.

Chang teaches of a rotary knob extending axially from its housing.

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Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the rotary knob standing axially or protruding from a side of the housing, as taught by Chang, in the device admitted as prior art because this is how the user's finger can better access the knob and senses better the amount of rotation that he is making on said knob. Under claim 4, applicant does not admit as prior art that the cursor control device can be a joystick.

Chang teaches that the cursor control device can be a joystick.

.Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have a joystick as a cursor control device, as taught by Chang, in the device admitted as prior art because any suitable component for entry of two-dimensional data can serve the same purpose (see col. 9, lines 21-25). Also, two-dimensional cursor control devices such as, a mouse, trackball, touch pad, joystick, etc, can be interchangeably used since they all can perform the same cursor control, command, and select functions.

3. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art in view of Chang as applied to claims 1 and 3-5 above, and further in view of DE 3624025 (Charwat).

Under claim 7, applicant admits as prior art, in Fig. 1 and page 2, lines 1-19, an input device for an aircraft vehicle computer system comprising a cursor control housing including a wrist rest portion (figure 1, numeral 11A), a cursor control device mounted on said housing forward of said

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wrist rest portion and within finger reach of said wrist rest, said device generating cursor control signals representative of X-Y (see page 6, lines 29-33) actuations of said device by an operator. However, applicant's admitted prior art fails to teach of a rotary knob mounted on said housing and within finger reach of said wrist rest, said knob generating rotary signals indicative of rotation of said knob.

Chang teaches, in Figs. 1 and 2, col. 4, lines 38-59 and col. 9, lines 8-28, a cursor control housing (Fig. 1, numeral 10) comprising a hand rest portion (see Figs. 1 and 2), a cursor control device (Fig. 1, numeral 32) forward of said hand rest portion and within finger reach, said device generating cursor control signals representative of operator activation of said device, and a rotary knob (Fig. 1, numeral 26) on said housing and within finger reach or said rest area, said knob generating rotary signals indicative of rotation of said knob.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the rotary knob, as taught by Chang, in the device admitted as prior art by the applicant because with the use of said knob, a third translation coordinate can be entered so that the cursor location can be entered more accurately (see col. 4, lines 41-44). Also, all the operations can be done without moving the hand from the hand rest so that the user does not need to move his eyes from the screen.

Under claim 7, however, applicant's admitted prior art, as modified by Chang, does not teach of manipulating said cursor control device to select a desired parameter and rotating said rotary knob to select a desired value for said parameter.

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Charwat teaches, in the abstract and Fig. 1 and in the abstract, manipulating display input values or parameters with a cursor control device (see Fig. 1, element CS) and incrementing and decrementing said parameters with a rotary knob (see Fig. 1, element DPG1).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the rotary knob to increase/decrease the parameter values selected by a cursor control device, as taught by Charwat, in the combined device of applicant's admitted prior art and Chang because by using a rotary knob, the selected information can be changed in a more comfortable manner since the changes of all the selectable parameters can be made with the same rotary knob, and the user does not need to be distracted by selecting a specific button to change a specific parameter value. Also, because by using a knob, such as a coarse-fine knob, specific parameter values can be found faster and more precisely since, as is conventionally known, the coarse knob permits large changes of parameter values, and the fine permit precise changes of parameter values.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following references all present rotary knobs being used in computer peripheral control devices.

Jaeger et al. (5,841,428), Will (5,825,353), Posso et al. (5,627,531), Caprara (5,563,629) and Masuda et al. (5,500,696).

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5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ricardo Osorio whose telephone number is (703) 305-1981. The examiner can normally be reached on Monday-Thursday from 7:00 AM to 5:30 PM.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.

6. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to: (703) 308-9051, (for formal communications intended for entry)

Or: (703) 308-6606 (for informal or draft communications, please label
"PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,
Arlington, VA., Sixth Floor (Receptionist).

Ricardo Osorio

May 26, 1999



Bipin H. Shalwala
Primary Examiner